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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/434,575	11/04/1999	DAVID A. G. DEACON	SPK-002	4114

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CHARLES K. YOUNG
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
12400 WILSHIRE BOULEVARD
7TH FLOOR
LOS ANGELES, CA 90025

EXAMINER

JACKSON, CORNELIUS H

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/434,575

Applicant(s)

DAVID A. G. DEACON

Examiner

Cornelius H. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 52-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 and 52-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.



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TECHNOLOGY CENTER 2800**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Acknowledgment

1. Acknowledgment is made that applicant's Response, filed on 16 June 2003, has been entered. Claims 1-35 and 52-55 are now pending in this case.

Response to Arguments

2. Applicant's arguments filed 16 June 2003 have been fully considered but they are not persuasive.

Applicant argued the following:

- a. Linke fails to disclose that the effective refractive index is permanently modifying.
- b. Linke fails to disclose that the waveguide segment is positioned intracavity, *within the cavity*.

Examiner replies to Applicant's arguments are as follows:

- a. Linke does to disclose that the effective refractive index is "*permanently modifying*", since the throughout the lifetime the invention, the modification process of the effective refractive index continues and endures without fundamental or marked change (therefore being permanent).

b. Linke does disclose that the waveguide segment (grating/reflective mirror as disclosed in Linke) is positioned intracavity, *within the cavity*, since the laser light enters and travels within the waveguide segment (grating/reflective mirror as disclosed in Linke) and is reflected back through the waveguide segment (grating/reflective mirror as disclosed in Linke) to the laser diode. Therefore, although the waveguide segment (grating/reflective mirror as disclosed in Linke) is positioned at an end of the cavity, the waveguide segment (grating/reflective mirror as disclosed in Linke) is also placed within the cavity.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3 and 52-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Linke et al. (6363097). Linke et al. disclose a method of adjusting a resonant cavity of a laser device comprising operating the laser device to produce an optical output; monitoring the optical output to determine the free spectral range of the laser device; and permanently modifying the effective refractive index of at least a portion of the intracavity waveguide segment, **see col. 3, line 15 through col. 5, line 7**.

In regard to claims 2-3, Linke et al. teach modifying the effective refractive index comprises illuminating the waveguide with an energy beam and all the other stated limitations, **see col. 3, lines 50-60**.

In regards to claim 17, it is inherent that the invention claimed in claim 1 employs the waveguide device claimed in claim 17. Therefore the rejection of claim 1 holds also on claim 17.

In regards to claim 52, Linke et al. teach all the stated limitations, see rejection to claim 1 above.

In regard to claims 18 and 53, see rejection to claim 2 above.

In regard to claims 19 and 54, see rejection to claim 3 above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-16, 20-35 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linke et al. (6363097) in view of Brinkman (6167169). Linke et al., as applied to claims 1-3, 17-19 and 52-54 above, disclose all the stated limitations except for the type of material used for the waveguide segment. Brinkman et al. teach the waveguide segment comprises a polymer structure and crosslinking in the polymer material, **see col. 17, lines 20-38**. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the materials taught in Brinkman et al. in the invention of Linke et al. in order to obtain a desired characteristic within the grating, **see col. 17, line 39-col. 18, line 61**.

In regard to claims 20 and 55, Linke et al. teach all the stated limitations, see rejection to claim 4 above.

In regard to claims 5-6 and 21-22, Brinkman et al. teach all the stated limitations, **see col. 60, line 61 through col. 61, line 12**.

In regard to claims 7-9, 12-15, 23-25 and 26-29, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

In regard to claims 10-11, Brinkman et al. teach all stated limitations, **see col. 33, lines 28-65**.

In regards to claim 16, Brinkman et al. teach all stated limitations, **see col. 6, lines 55- 65**.

In regard to claims 30-32, also see claim 3 above.

In regards to claim 33, Brinkman et al. teach phase matching, **see col. 24, line 55 through col. 25, line 14.**

In regards to claim 34, Brinkman et al. teach temperature control, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a heater element disposed adjacent to the index grating if so desired as an obvious design choice, **see claims 7-9 and 12-15 above.**

In regards to claim 35, also see claim 16 above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (703) 306-5981. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



chj
September 3, 2003



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